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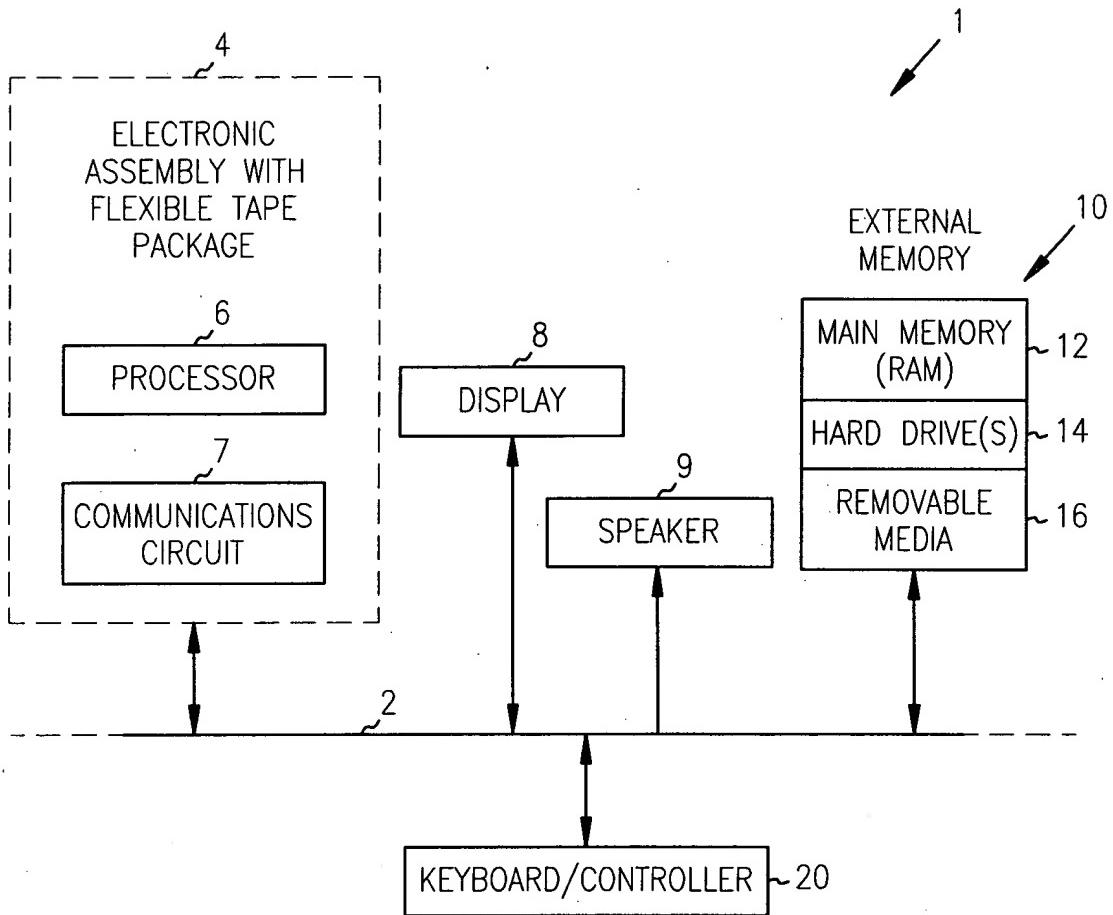


FIG. 1

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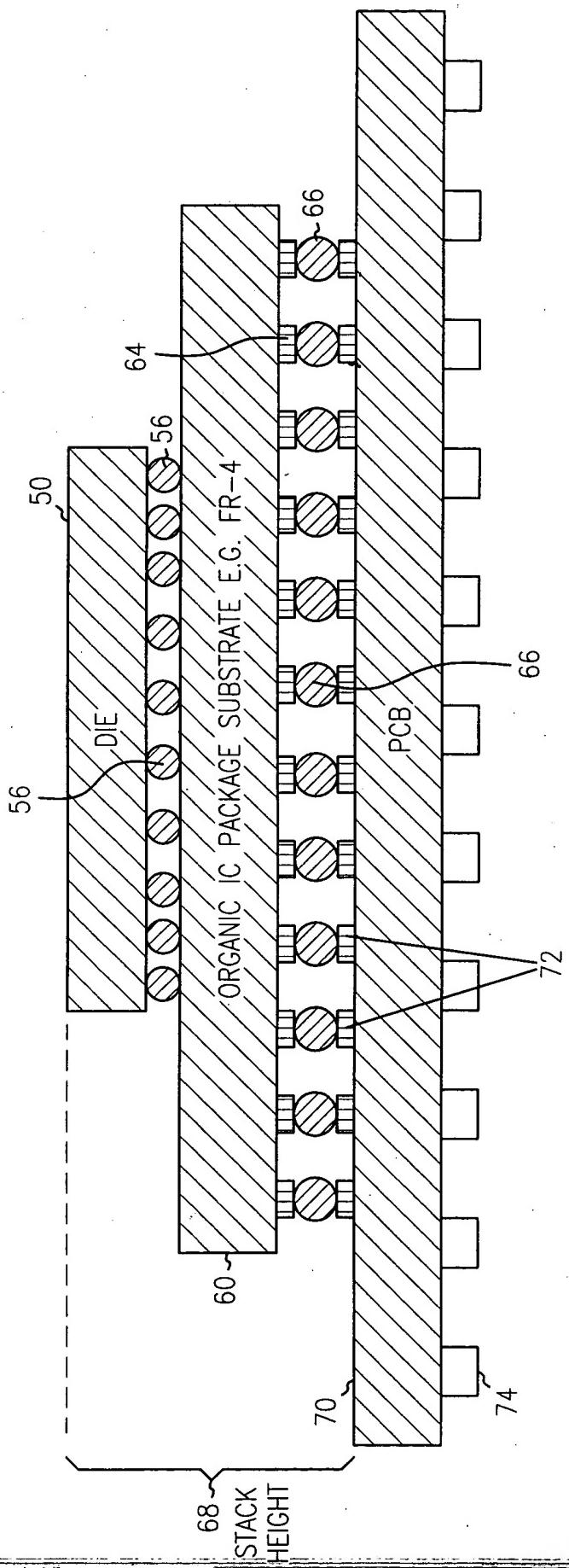


FIG. 2

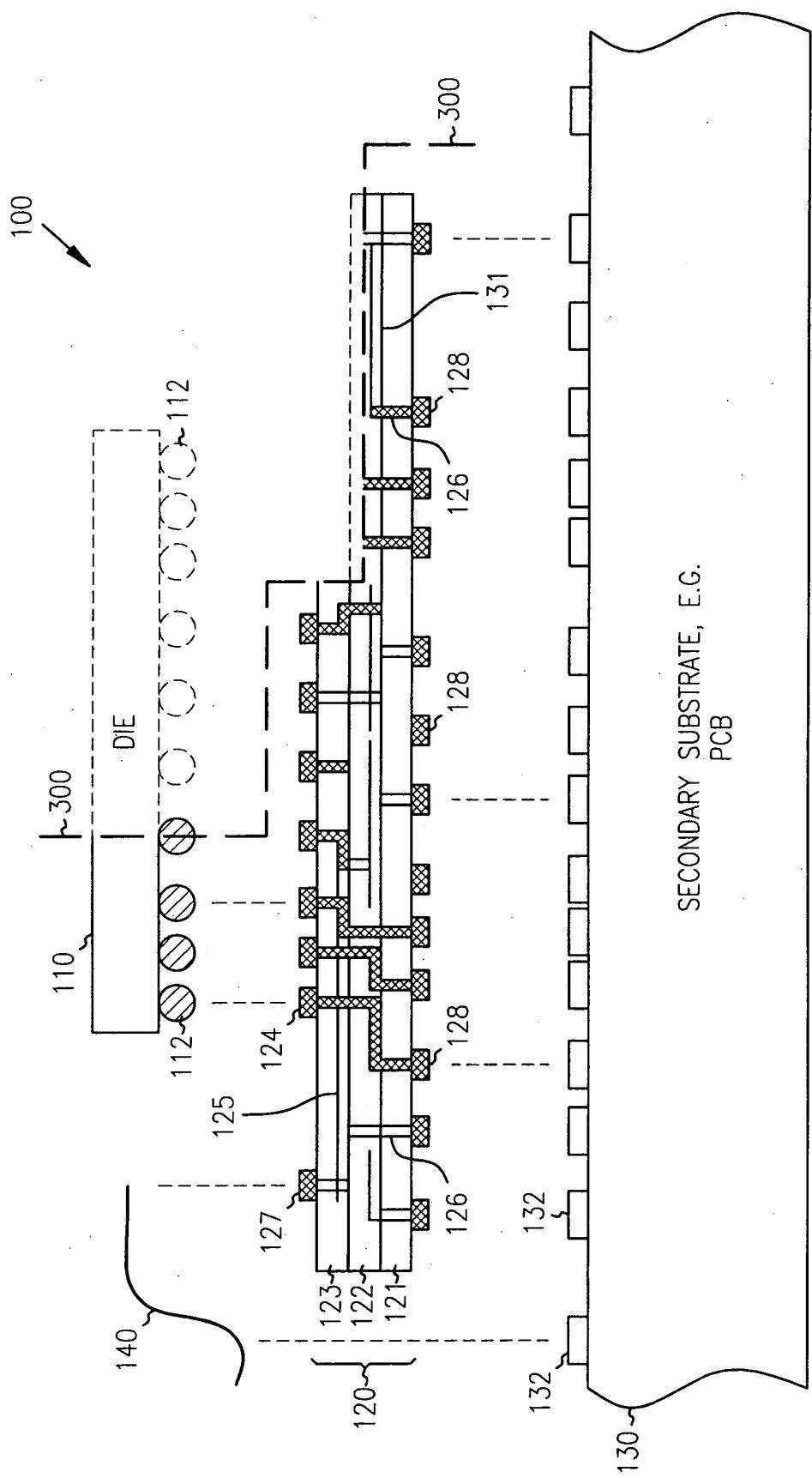


FIG. 3

SEARCHED INDEXED

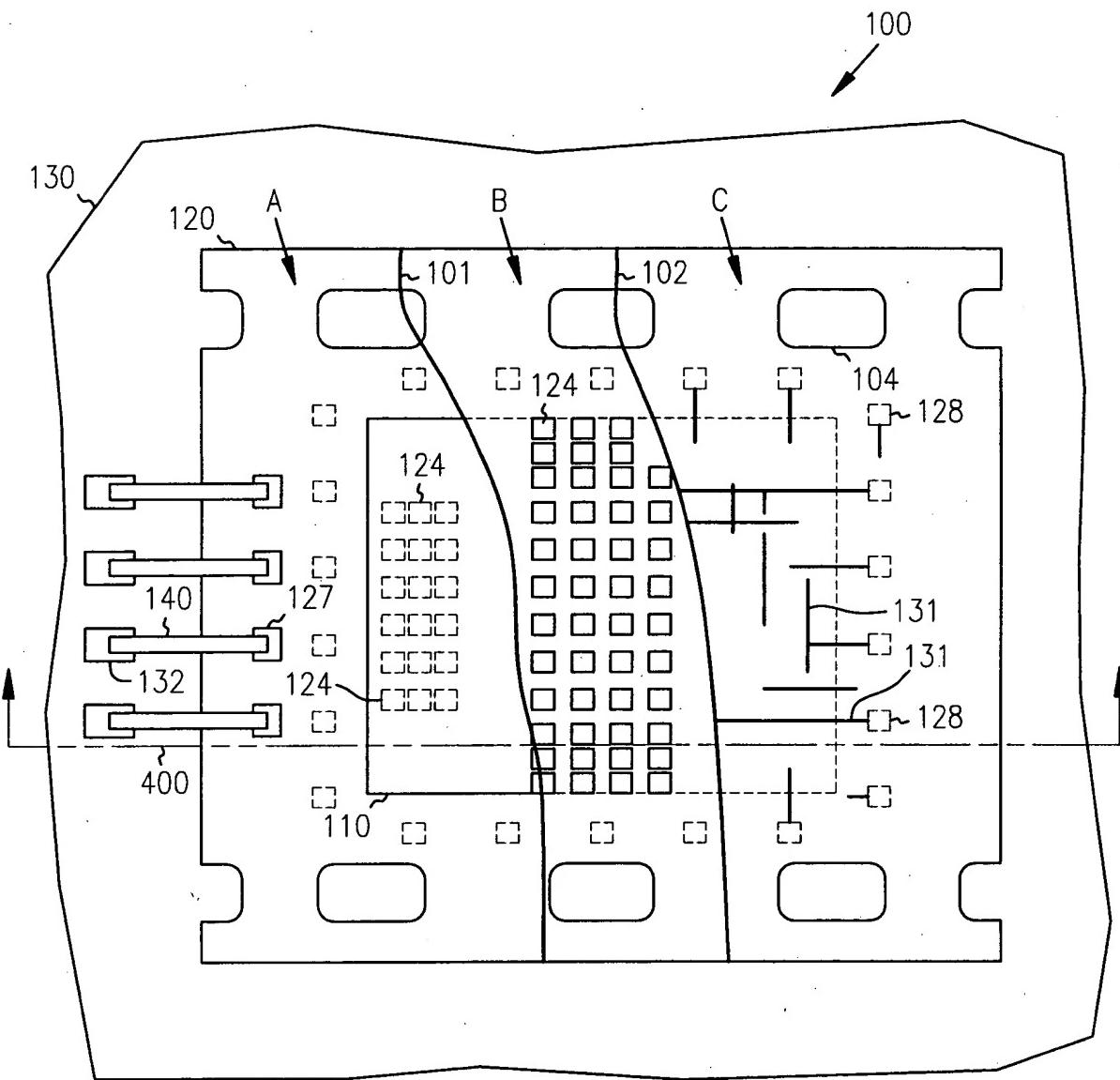


FIG. 4

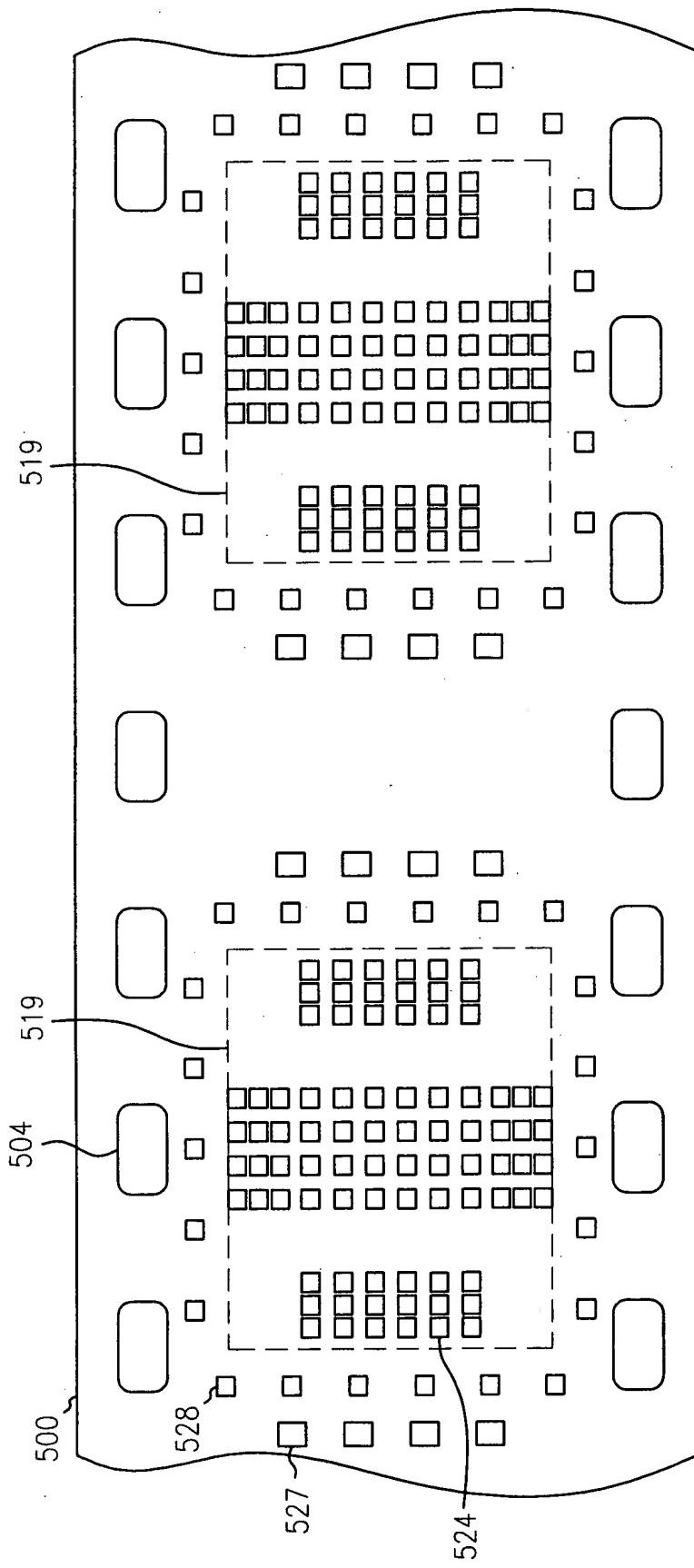
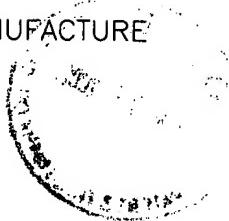


FIG. 5



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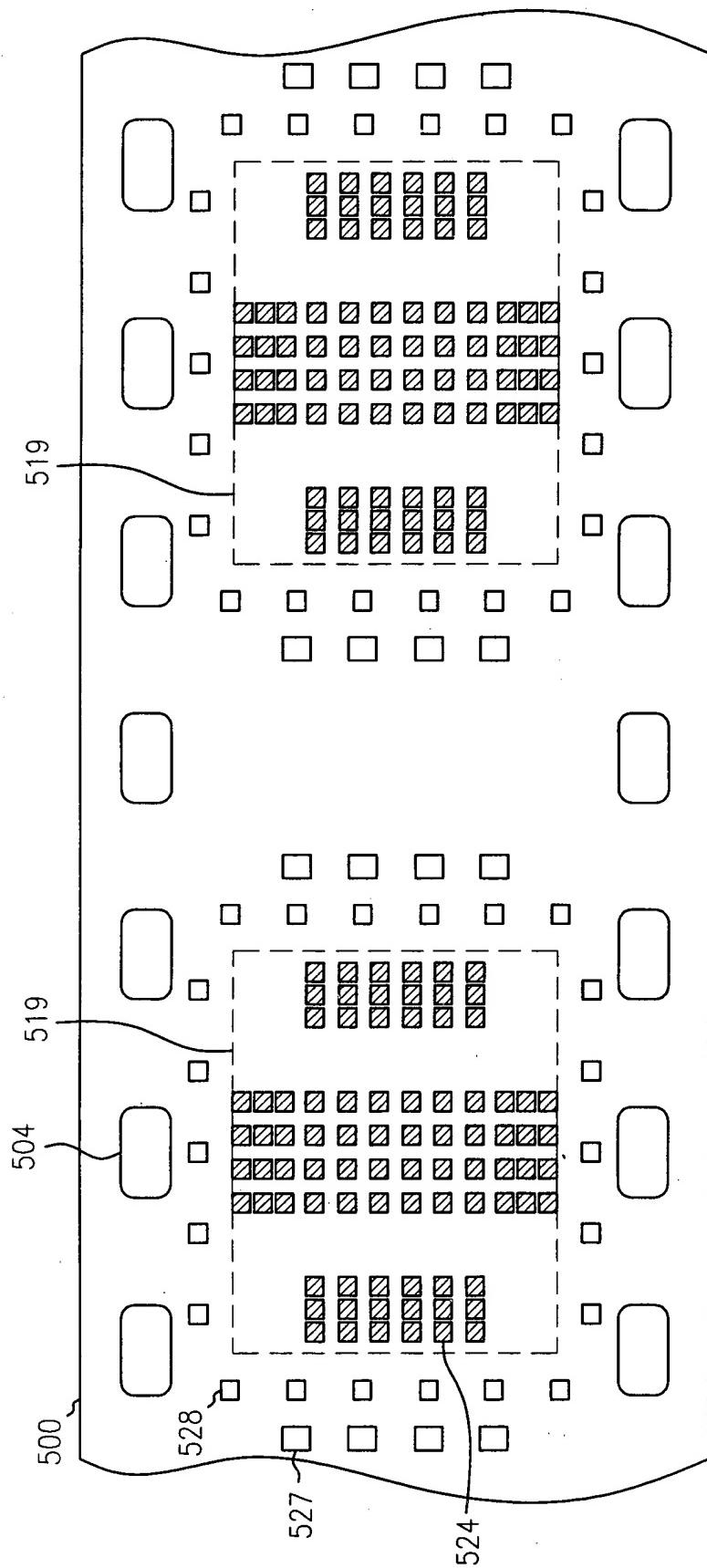


FIG. 6

FIG. 7

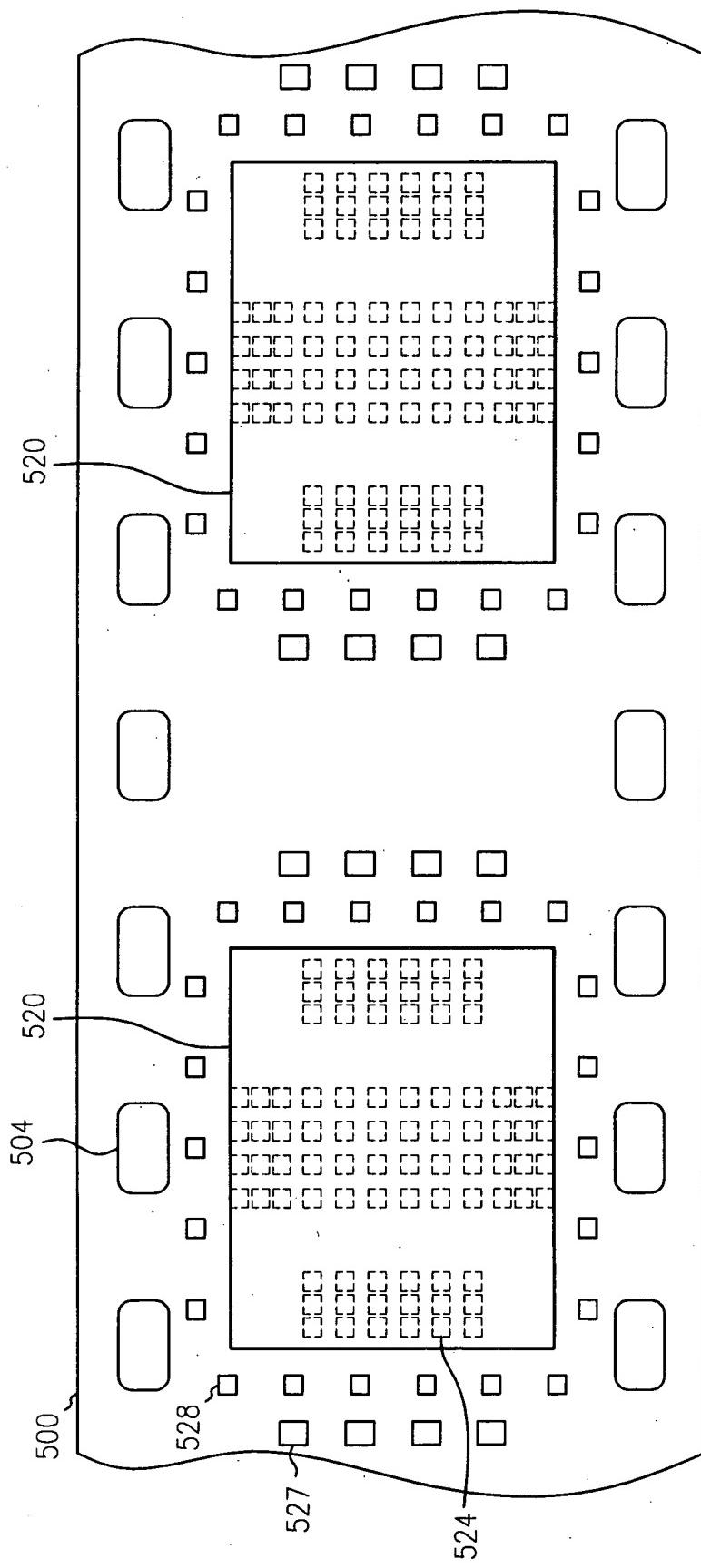


FIG. 7

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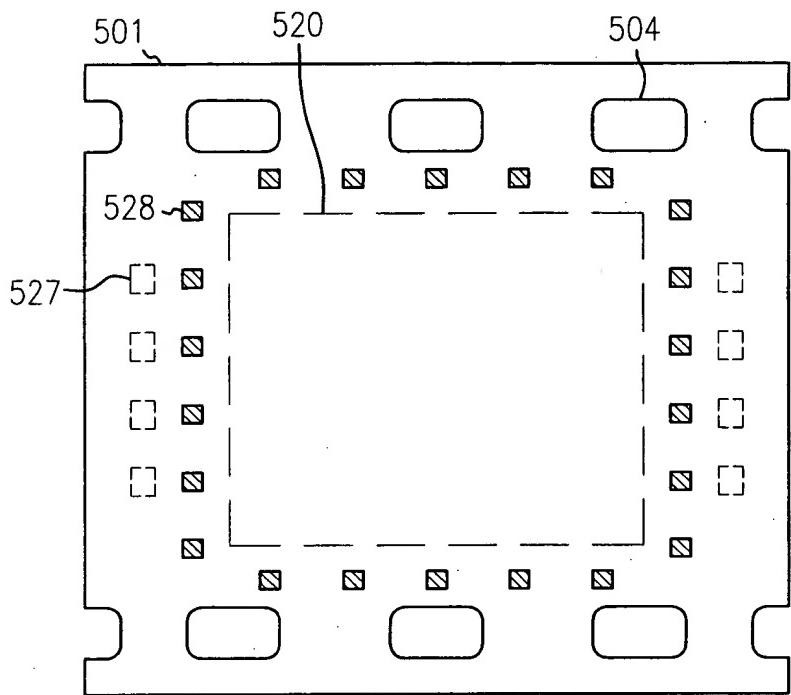


FIG. 8

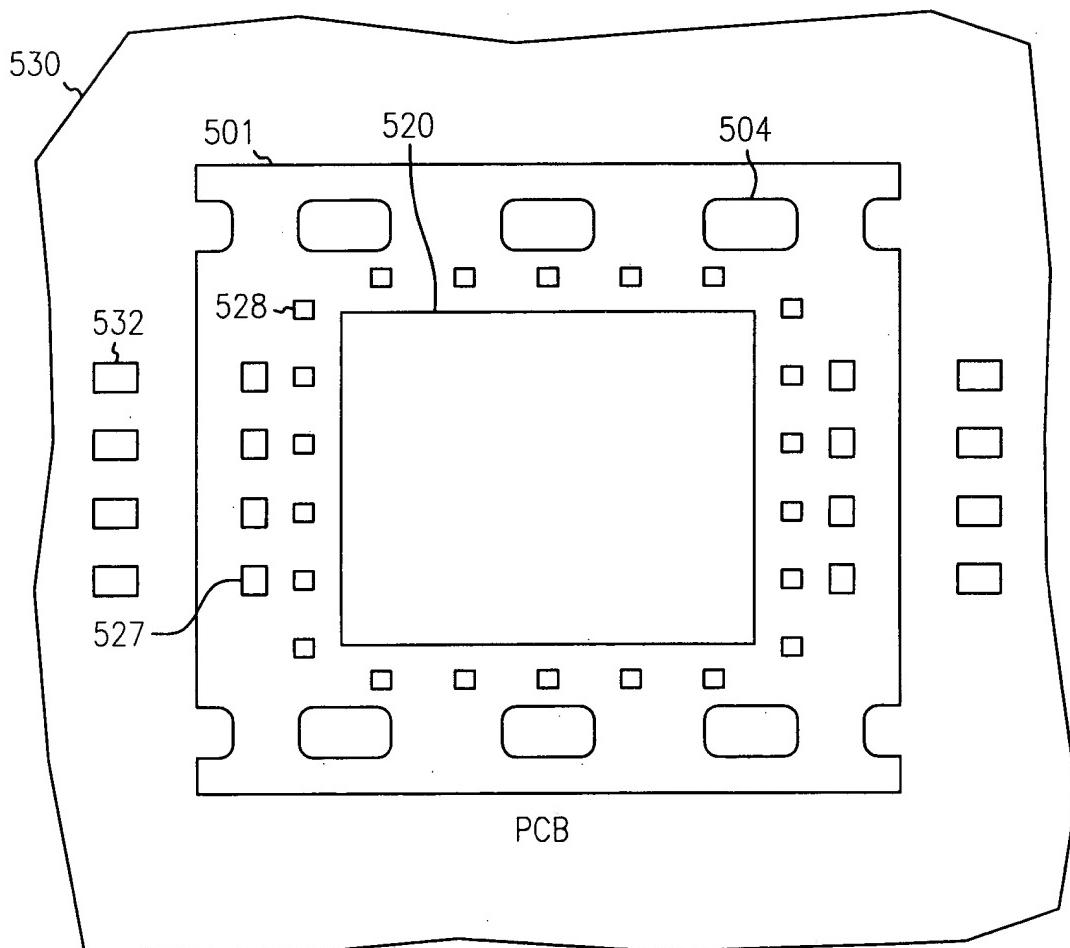


FIG. 9

TITLE: FLEXIBLE TAPE ELECTRONICS PACKAGING AND METHODS OF MANUFACTURE  
INVENTORS NAME: Ajit V. Sathe  
SERIAL NO.: 09/893,036

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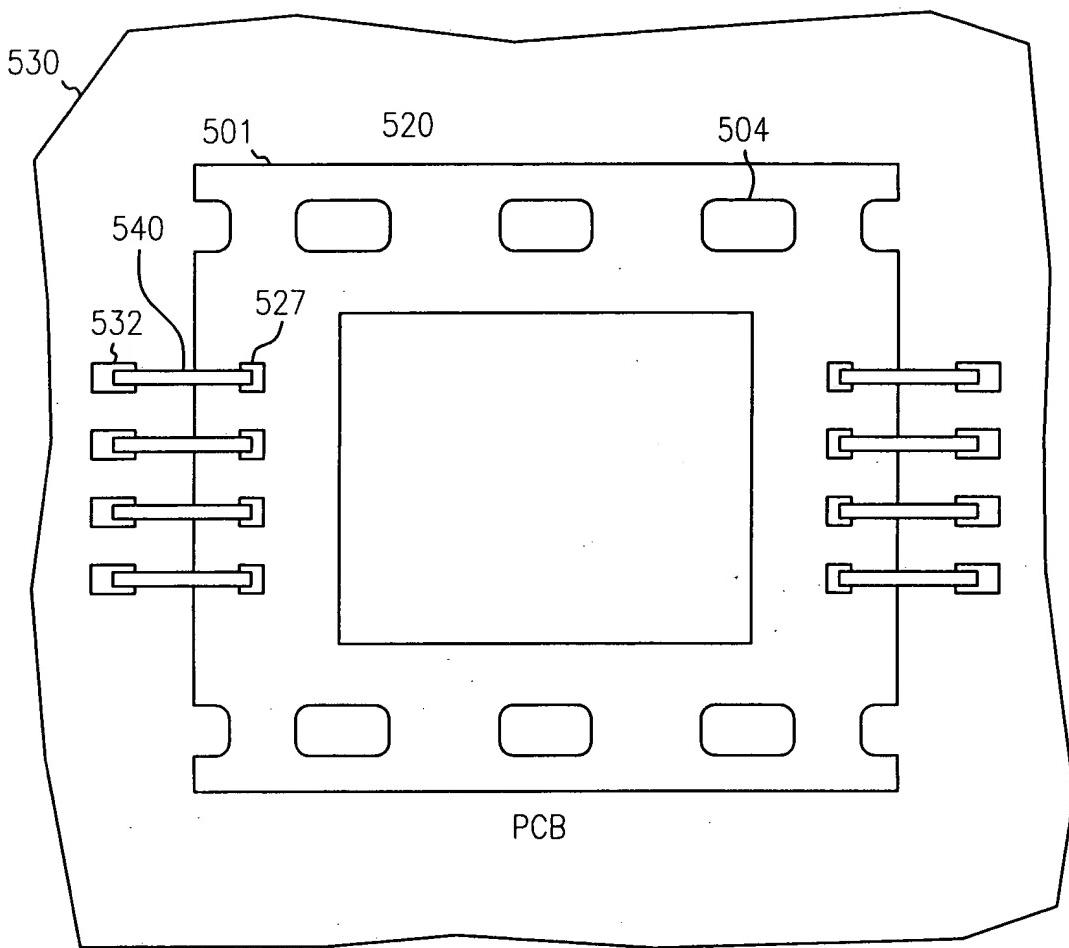


FIG. 10

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600

METHOD OF MAKING A FLEXIBLE IC PACKAGE SUBSTRATE

602

METHOD OF MAKING A FLEXIBLE IC PACKAGE SUBSTRATE

- THE SUBSTRATE IS FORMED OF MATERIAL SUCH AS A POLYMERIC FILM, POLYIMIDE, POLYESTER, POLYPARABANIC ACID, EPOXY, FIBERGLASS, OR COMBINATION THEREOF
- THE SUBSTRATE HAS A CONDUCTOR REGION ADAPTED TO MOUNT AN IC
- THE SUBSTRATE CAN INCLUDE FROM 1 TO N LAYERS
- THE SUBSTRATE CAN COMprise SPROCKET HOLES OUTSIDE THE CONDUCTOR REGION

604

FORM A PLURALITY OF TRACES IN THE CONDUCTOR REGION

- THE TRACES CAN BE FORMED ON DIFFERENT LAYERS

606

FORM A PLURALITY OF LANDS COUPLED TO CERTAIN TRACES

- LANDS CAN BE FORMED ON OPPOSITE SURFACES OF THE SUBSTRATE
- LANDS CAN BE ARRANGED IN A BALL GRID ARRAY

608

FORM SOLDER BALLS ON THE PLURALITY OF LANDS

- THE SOLDER BALLS CAN BE FORMED ON DIFFERENT GROUPS OF THE LANDS, E.G. A FIRST SET TO COUPLE TO AN IC, A SECOND SET TO COUPLE TO A PCB

END

~610

FIG. 11

11/12

700

METHOD OF MAKING AN ELECTRONIC ASSEMBLY

702

- THE SUBSTRATE IS FORMED OF MATERIAL SUCH AS A POLYMERIC FILM, POLYIMIDE, POLYESTER, POLYPARABANIC ACID, EPOXY, FIBERGLASS, OR COMBINATION THEREOF
- THE SUBSTRATE HAS A CONDUCTOR REGION
- THE CONDUCTOR REGION INCLUDES A PLURALITY OF TRACES AND A PLURALITY OF LANDS COUPLED TO CERTAIN TRACES
- THE SUBSTRATE CAN INCLUDE FROM 1 TO N LAYERS, EACH COMPRISING A PLURALITY OF TRACES IN THE CONDUCTOR REGION
- THE LANDS CAN BE FORMED ON DIFFERENT LAYERS
- THE SUBSTRATE CAN COMprise SPROCKET HOLES OUTSIDE THE CONDUCTOR REGION

704

FORM SOLDER BALLS ON A FIRST SET OF THE LANDS

- THE FIRST SET OF LANDS CAN BE A BALL GRID ARRAY

706

COUPLE PADS OF AN IC TO CORRESPONDING ONES  
OF THE FIRST SET OF LANDS

12B

FIG. 12A

12/12

12A

708

MOUNT THE SUBSTRATE ON AN ADDITIONAL  
SUBSTRATE, E.G. A PCB

EMPLOY EITHER OR BOTH OF THE FOLLOWING:

- USE BGA BETWEEN SUBSTRATE AND PCB
- FORM SOLDER BALLS ON A SECOND SET OF THE LANDS
- COUPLE ONES OF THE SECOND SET OF LANDS TO CORRESPONDING TERMINALS ON THE PCB
  
- USE LEADS BETWEEN SUBSTRATE AND PCB
  - COUPLE LEADS, E.G. WIRES, BETWEEN CORRESPONDING ONES OF A THIRD SET OF LANDS AND ADDITIONAL TERMINALS OF THE PCB

END

710

**FIG. 12B**